

SEMICONDUCTOR DEVICE WITH SELF-ALIGNED JUNCTION CONTACT HOLE
AND METHOD OF FABRICATING THE SAME

Abstract of the Disclosure

- 5 A plurality of trenches for defining active regions are formed in a semiconductor substrate, using a plurality of trench masks. A gap fill insulating layer is formed on the resulting structure to fill a gap region bounded by the trench and the trench masks. Next, the trench mask and the gap fill insulating layer are patterned to form a trench mask pattern and a gap fill insulating pattern for defining a slit-type opening, extending across and exposes the
- 10 active region. A gate pattern is formed in the slit-type opening and the trench mask pattern is removed to form a contact opening exposing the active region. Next, a contact plug is formed to fill the contact opening. Here, the contact opening is self-alignedly formed using an etch selectivity between the trench mask and the gap fill insulating layer. The resulting contact opening is a vacancy in a rectangular parallelepiped shape.